

ATOMIC ENERGY *newsletter*®

A SERVICE FOR INDUSTRY BUSINESS ENGINEERING AND RESEARCH
ROBERT M. SHERMAN, EDITOR. PUBLISHED BI-WEEKLY BY ATOMIC ENERGY NEWS CO., 1000 SIXTH AVENUE, NEW YORK 18, N. Y.

Dear Sir:

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Reduction for the year in net assets of \$3,760,256.00 is shown in Atomic Development Mutual Fund's quarterly report of Sept. 30, 1956. The Fund had assets of \$44,048,160 on Sept. 30, 1955 which had decreased to \$40,287,904 on Sept. 30, 1956. Its shares outstanding had also decreased by 403,692 during this period. Losses were experienced in its uranium stocks (U.S. and Canada), and in other issues. Newton I. Steers, Jr., president, told his shareholders the Fund believes its "uranium investments are being undervalued by the securities market". (Other FINANCIAL NEWS, p. 2 this LETTER.)

Third nuclear power plant, for Latin America installations of American & Foreign Power, Inc., will be bought from International General Electric Co., Henry B. Sargent, president of the utility, told the Western Area Development Conference in Phoenix last week. Brazil, Cuba and Mexico will be sites of these plants, Mr. Sargent stated. In addition to International G-E, (which now holds orders for two nuclear power plants from American & Foreign Power), North American Aviation's Atomics International division will supply the remaining reactor, subject to "satisfactory progress in certain developmental work now underway", Mr. Sargent said at the conference. (Other BUSINESS NEWS, p. 4 this LETTER.)

Contract has been signed by Trace Elements Corp., Grand Junction, Colo., with USAEC, providing for purchase by the Government of uranium concentrates to be produced in Trace Element's proposed full-scale processing mill at Maybell, Colo. The new contract supersedes a previous one, and provides for purchase of a larger quantity of concentrates than had initially been contracted for. Construction of the new plant will start shortly; ores from northwestern Colorado will be handled by the mill. (Other CONTRACTS LET, BIDS ASKED, p. 3 this LETTER.)

Continuous light emitting device utilizing radioactive isotopes has now been placed on the market by New England Nuclear Corp., Boston. The firm has manufactured the device, which uses a non-hazardous radioisotope, with a variety of light outputs and colors....Using a new nitric acid exchange process, Isomet Corp., Palisades Park, N.J., is manufacturing nitrogen-15 isotopes enriched to above 95%.

Month-long study of the radioactivity of the waters of the equatorial Pacific, the site of the hydrogen bomb experiments of the U.S., has been completed by Japanese, French, and U. S. ships. Some eleven ships were involved; water samples were collected within weeks of the last announced U. S. nuclear tests. Analyses of the samples are being made in Japan to determine amount of radioactive materials present.

New area of uranium mineral deposition is being explored by Lisbon Uranium Corp., Salt Lake City, in the Little Mountain district of Big Horn County, Wyoming, according to A. P. Kibbe, president. Mr. Kibbe said that while only additional development can show the true extent of the mineralization, the company feels that potential does exist, and has consequently acquired, through purchase or acquisition of options, interests in about 300 contiguous claims in the area within the Big Horn Mountain range. (Other RAW MATERIAL NEWS, p. 2 this LETTER.)

ATOMIC ENERGY FINANCIAL NEWS...

OFFICIAL OF MUTUAL FUND IN ATOMIC FIELD ASKS FOR PROXIES:- Stockholders of Beaver Lodge Oil Corp., Dallas, have received request from Merle Thorpe, Jr., chairman of the board, Atomic Development Mutual Fund, Inc., Washington, to return a proxy to him and to permit a special stockholders' meeting for the purpose of turning over control of the company to unnamed persons whom he says represent holders of 11% of Beaver Lodge stock. (The Fund holds 89,200 shares of Beaver Lodge; this LETTER, May 15, 1956, p. 1 stated "substantial losses in market value... in Beaver Lodge... were shown". Since then, further losses have occurred.) Mr. Thorpe is opposed by Critchell Parsons, president of Beaver Lodge, who has written the company stockholders explaining and justifying his conduct of company matters. (Interest of Fund in Beaver Lodge, whose principal income comes from its New Mexico natural gas wells, stems from its related company, Rocky Mountain Uranium Corp. Current difficulties of Beaver Lodge are its income curtailment because of gas production cutbacks enforced by State of New Mexico, and its inability to make regular payments on note held by Republic National Bank, Dallas.)

MUTUAL FUND SHOWS GAIN:- An asset gain of 105% (\$747,036) for the year ended September 30, 1956 has been made by Science & Nuclear Fund, Donald F. Bishop, Fund president has told his stockholders. Total assets of the Fund on the September 30th date were \$1,460,151 or \$11.30 per share. Investments by this Fund are in companies engaged in scientific fields, including the nuclear.

REVENUE UP AT CANADIAN URANIUM PRODUCER:- Gross revenue of Pronto Uranium Mines for quarter ended Sept. 30, 1956 was \$1,953,598 as compared with \$1,607,428 for the previous quarter. Company said the increase was result of improvement in the grade of ore treated, as well as in the operation in general. (Pronto, with H. E. Nelems, managing director, is one of the Rio Tinto (Canada) group of properties, ultimate control of which lies in the British Rio Tinto organization.)

RAW MATERIALS...prospecting, mining, marketing...

UNITED STATES:- What the company terms "a very promising wildcat uranium strike" has been made on its San Juan claims north of Austin, Nevada, according to W. H. Schwedler, chairman of the board, Sunburst Uranium Corp. Staking of the find was done by J. C. Young, and K. Critchlow, executive officers and directors of Sunburst, who also operate the Young & Critchlow Geophysical Service, Portland, Ore. Sunburst now holds approximately 2,600 acres in the Austin and Tonopah areas in Nevada, and near uranium mines in the Colorado plateau close to Moab, Utah.

New 24-inch ore face assaying 1% uranium oxide and 26 ounces of silver per ton has been shown on the 125-foot level in the Big Hill mines on the Silver Reef property of Western Gold & Uranium Inc., according to R. G. Brown, company president. The company's subsidiary, Golden Crown Mining Co., is now increasing uranium ore production from its Orphan mine in Arizona, where ores have an average assay of over 0.4% uranium oxide, Mr. Brown states.

Hecla Mining Co., under an agreement with Uranium Mines, Inc., Wallace, Idaho, will explore the latter's Tucker Flat and Big Flat properties in the Big Indian district of San Juan county, Utah. Hecla will spot and drill 12 exploratory holes on the claims before March 1, 1958, according to the agreement.

CANADA:- Bicroft Uranium Mines (Macassa-managed) Ontario, now in production, are treating some 450 tons per day in one unit of its 1,000-ton capacity mill. Imminent start-up of its second unit is anticipated, in advance of the formal mill opening date of November 30th. It is believed that the company will then be finished with its present tune-up operations, and be able to start making deliveries under its Canadian government contract for \$35,805,000 in uranium concentrates.

Eleven Canadian uranium mines will benefit directly from the modifications and extensions of the purchase contracts which have been let by Eldorado Mining & Refining, Ltd., the Canadian government official uranium purchasing agency. (Extensions apply to companies not yet in production and whose contracts made no allowance for a full 5-year write-off of capital and preproduction expenses.) Biggest boost goes to Northspan Uranium Mines, with a jump from approximately \$242 million to \$275 million. Other companies that will benefit include Milliken Lake Uranium, Can-Met Explorations, Dyno Mines, Greyhawk Uranium Mines, Lorado Uranium Mines, Cavendish Uranium, and Rexspar Uranium and Metals Mining Co.

CONTRACTS LET, BIDS ASKED...

BIDS ASKED:- Bids have been asked by the USAEC for commercial companies to submit proposals for the purchase of uranium-magnesium-fluoride slag and for the recovery of the contained uranium by processing the material in privately-owned facilities. Some 4,000 tons of the slag are available annually; uranium recovered will be repurchased by the USAEC. The program was first announced in January of this year; formal invitations to submit proposals are now being sent to interested firms, who should write F. R. Dowling, USAEC, Oak Ridge, Tenn.

Plans and specifications are being issued to interested bidders for additions and modifications to buildings in the central facilities, chemical processing plant, and experimental breeder reactor areas of the national reactor testing station, Idaho Falls, Idaho. Inquiries concerning this work, under contract AT(10-1)-877, should be made to the USAEC operations office at Idaho Falls.

CONTRACTS AWARDED:- Contract to construct building to house Canada's first nuclear power reactor has been awarded the Foundation Co. of Ontario, Ltd. Total amount is slightly in excess of \$1 million. Building will be on the Ottawa river, a few miles downstream from Ontario Hydro's Des Joachims generating station.

First contract calling exclusively for the shipment to another country of nuclear fuel elements fabricated by a U.S. firm has been awarded Sylvania Electric Products, Inc., by Atomic Energy of Canada, Ltd. Some 40 fuel elements will be supplied; fabrication will start immediately Sylvania gets special license from the USAEC. (Typical element will contain a total of ten fuel plates fabricated of enriched uranium and aluminum.)

Lump-sum contract has been awarded by the USAEC (Schenectady office) to Nager Electric Co., Inc., and Keystone Engineering Corp., Brooklyn, N.Y., for "second-phase" construction of service buildings and facilities for the submarine advanced reactor prototype propulsion plant at West Milton, N.Y. Award, made jointly to the two companies, in amount of \$2,195,000.00, was lowest of four bids received. (Submarine advanced reactor, a high performance nuclear power plant for submarine propulsion, is being designed and developed at the USAEC's Knolls Atomic Power Laboratory by General Electric Co., contract-operator of Knolls. Prototype plant, to be installed in facilities at West Milton, N.Y., will consist of a section of submarine hull containing the reactor with primary coolant system and related control, auxiliary systems, and steam producing equipment.)

Sverdrup & Parcel, San Francisco, have been selected as architect-engineer for the construction of facilities for the Livermore Branch of Sandia Corp., contractor to the USAEC. (Sandia, division of Western Electric, is concerned primarily with various nuclear weapon systems.)

Contract to build nuclear propulsion system for the U.S.'s first nuclear powered merchant ship will be negotiated by the USAEC with Babcock & Wilcox Co., New York. (Although dollar amount of work to be done by B&W is not too clearly defined, out of the \$42.5 million appropriated by Congress for this ship, about \$24.5 million is for the propulsion plant to be built under USAEC supervision.) Under the proposed contract, B&W will design, construct and operate a 20,000 shaft HP pressurized water reactor system of advanced design. B&W's proposal won out over three other proposals made to do the job by Foster-Wheeler Corp., New York, General Electric Co., Schenectady, and Ingalls Shipbuilding Corp., Birmingham (jointly with Westinghouse Electric Corp., Pittsburgh).

New uranium contracts have been awarded by Defense Minerals Exploration Administration to L.E. Cox & T. R. Gillenwaters, Mesa county, (\$19,960); Monarch Exploration Co., Saguache county (\$55,580); Vulcan Silver Lead Corp., Saguache and Gunnison counties (\$160,369); all in Colorado. In Utah, awards were made to W. J. Hannert, Emery county (\$55,080); Radium King Mines, Inc., San Juan county (\$26,280).

NEW BOOKS & OTHER PUBLICATIONS...on nuclear energy subjects...

True Book about Atomic Energy, by A. Radcliff, E. Roberson. Popular account of the subject by two British writers. 142 pages. --Philosophical Library, Inc., New York 16. (\$4.75).

Collective Protection Against Chemical, Biological & Radiological Warfare Agents. Engineering manual for underground installations. No. D103.9:pt.26/chap. 1/956. --Chief of Engineers, U.S. Army, Wash. 25, D.C. (publications office).

Symposium on Applications of Radioactivity in Petroleum Research & Refinery Ops. Abstracts of talks at symposium held by Tracerlab, Inc., Boston, Oct. 24-26, 1956. --Symposium Committee, Tracerlab, Inc., 130 High St., Boston 10, Mass.

NEW RESEARCH ACTIVITIES...progress reports...

NUCLEAR RESEARCH CENTER COMPLETED:- Battelle Institute, Columbus, Ohio, has completed its nuclear research center and is now offering on a contract basis nuclear research in fields ranging from ore processing to reactor metallurgy, to power reactor development, etc. The Institute noted that its \$750,000 nuclear research reactor, which recently started up, and is designed exclusively for research purposes, will be operated 24-hours a day, six days a week.

NEW REACTOR FOR WEST COAST LABORATORY:- A one megawatt research reactor is planned for its Laboratory for Pure and Applied Science, San Diego, by General Dynamics Corp. The laboratory is operated by its General Atomic division. Reactor will have a solid homogeneous core, with the uranium fuel and moderator so mixed that a large prompt negative temperature coefficient will be built into the reactor, according to Frederic de Hoffman, division general manager of General Atomic.

UNIVERSITY RESEARCH EXPANDED:- Research into stresses set up in components of a nuclear reactor will be conducted under a program being initiated at the University of Tennessee. Recent grant of \$60,000 made to the University by Union Carbide Nuclear Co. will support the research, which will be directed by P. F. Paqua, head of the mechanical engineering department of the University.

ATOMIC ENERGY BUSINESS NEWS...

THIRD FOREIGN NUCLEAR REACTOR SALE MADE BY U.S. FIRM:- ACF Industries, Inc., New York, through its nuclear energy products division, has made its third reactor sale abroad; purchaser was Atomic Energy Co. of Sweden. This latest order covers a 30,000-kw research and materials testing reactor, which will be built at Studsvik; approximate cost will be 10 million Swedish kroner, or about \$2 million. Total cost of the reactor, buildings, and auxiliary equipment is expected to run about 25 million kroner, or about \$2 million. (ACF's previous foreign sales included a 5,000-kw research reactor to Italian Committee for Nuclear Research, and a 20,000-kw materials testing and research reactor to the Reactor Center of the Netherlands.)

NEW REACTOR CONSTRUCTION POLICY ESTABLISHED:- In a major policy move, the USAEC said last week that it will build new test reactors and permit non-Governmental use of its test reactors only when private commercial facilities were not available. The Commission said it intends to ask for proposals from commercial firms to supply irradiation services that it may require for its own purposes.

FIRST NUCLEAR REACTOR FOR VENEZUELA TO BE FURNISHED BY U.S. FIRMS:- General Electric Co., and General Nuclear Engineering Corp., Dunedin, Fla., will now furnish Venezuela's first nuclear reactor. The Atomic Power Equipment Department of G-E, San Jose, Calif., will build the reactor, a 3000-kw (heat) swimming pool type, which will be installed at the research center of the Instituto Venezolano de Neurologica E Investigaciones Cerebrales (IVNIC). General Nuclear will act as consulting engineers for the project, including experimental requirements and design of housing for the reactor.

FUTURE U.S. NAVY NUCLEAR POWER PLANS DESCRIBED:- Nuclear power is conventional for all new submarines, Secretary of the Navy Charles S. Thomas told the New York Council of the Navy League last week in New York. It will also soon be conventional for cruisers and carriers, and "sooner than we think for smaller combat ships such as destroyers". He observed that the U. S. Navy now had fifteen nuclear powered submarines, one cruiser, and the nuclear propulsion plant for one aircraft carrier either built, building, or authorized. The aircraft carrier will have a speed of thirty-three knots, and will use eight nuclear reactors in its power plant, Mr. Thomas explained. Thirteen of the fifteen nuclear powered submarines will be attack models, he said, while of the remaining two, one will be a radar picket submarine and the other a guided missile launching type.

EXPORT LICENSE ISSUED:- In the first commercial transaction of its kind in the U.S., license to export a nuclear research reactor to Japan has been issued by the USAEC. License was issued to the New York firm of Marubeni-Iida for export of a reactor fueled by an aqueous solution of uranyl sulphate and operating at 50-kw, for use in Japan by the Japan Atomic Energy Research Institute. Atomics International division of North American Aviation is manufacturing the reactor at its Canoga Park, Calif., plant and will deliver it to Marubeni-Iida for export from a Pacific Coast port.

ATOMIC ENERGY PATENT & TRADE-MARK DIGEST...grants & applications...

PATENT GRANTS TO PRIVATE INDIVIDUALS AND/OR ORGANIZATIONS:- Radiation detector (scintillometer). U.S. Pat. No. 2,768,307 issued Oct. 23, 1956; assigned to The Texas Co., New York, N.Y. (Application: July 26, 1952). (Inventor: A. L. Tirico.)

Detector for measuring radiation. U. S. Pat. No. 2,768,308 issued Oct. 23, 1956; assigned to General Electric Co., New York. (Application: Nov. 2, 1951). (Inventor: W. W. Schultz.)

Multiple target sources of radioactive radiations and methods using them. U. S. Pat. No. 2,769,096 issued Oct. 30, 1956; assigned to Schlumberger Well Surveying Corp., Houston, Texas. (Application: Apr. 9, 1952.) (Inventor: H. B. Frey, Jr.)

Thickness measuring instrument using penetrative radiation. U. S. Pat. No. 2,769,097 issued Oct. 30, 1956; assigned to The Texas Co., New York, N.Y. (Application: Apr. 22, 1953.) (Inventor: A. H. Lord.)

PATENT GRANTS TO GOVERNMENTAL ORGANIZATIONS:- Radioactive voltage charging device with controllable means. U. S. Pat. No. 2,768,313 issued Oct. 23, 1956; assigned to United States of America (Secretary of the Air Force). (Application: Oct. 1, 1952.) (Inventor: Paul Rappaport.)

Wide range radiation measuring instrument. U. S. Pat. No. 2,769,098 issued Oct. 30, 1956; assigned to United States of America (Secretary of the Navy). (Application: Apr. 21, 1953.) (Inventor: S. B. Dunham.)

Process for recovering uranium and upgrading alkali-uranium fluoride precipitates. U. S. Pat. No. 2,768,059 issued Oct. 23, 1956; assigned to United States of America (USAEC). (Application: June 3, 1953.) (Inventors: R. H. Bailes, R. O. Lindblom, R. G. Grinstead.)

Testing material in a nuclear reactor. U. S. Pat. No. 2,768,134 issued Oct. 23, 1956; assigned to United States of America (USAEC). (Application: Aug. 28, 1945.) (Inventors: Enrico Fermi, H. L. Anderson.)

Heat exchangers using hot corrosive liquids. U. S. Pat. No. 2,768,813 issued Oct. 30, 1956; assigned to United States of America (USAEC). (Application: May 28, 1945.) (Inventor: R. Q. Boyer.)

Carbonate precipitation process for recovering plutonium from neutron irradiated uranium. U. S. Pat. No. 2,768,871 issued Oct. 30, 1956; assigned to United States of America (USAEC). (Application: July 30, 1945.) (Inventors: H. S. Brown, O. F. Hill.)

Manufacture of uranium tetrafluoride. U. S. Pat. No. 2,768,872 issued Oct. 30, 1956; assigned to United States of America (USAEC). (Application: July 30, 1945.) (Inventors: David X. Klein, H. B. Gage.)

Uranium purification process. U. S. Pat. No. 2,768,873 issued Oct. 30, 1956; assigned to United States of America (USAEC). (Application: July 7, 1944.) (Inventor: Norman C. Beese.)

Time-of-flight neutron spectrometer. U. S. Pat. No. 2,769,094 issued Oct. 30, 1956; assigned to United States of America (USAEC). (Application: Dec. 7, 1945.)

TRADE-MARKS ISSUED:- Mark "Urani-Tector" has been issued under no. 636,155 to Mallory-Cinnamon for prospecting device for radioactive minerals.

APPLICATIONS FILED (GREAT BRITAIN):- Beta particle back scatter thickness gauge using scintillation counter. U.K. application no. 21790/55, filed by U.K. Atomic Energy Authority.

Tap for cutting threads in difficult metals. U. K. application no. 22086/55, filed by U. K. Atomic Energy Authority.

PEOPLE...in atomic energy work...

H. Brynielson of Sweden is to be first Director-General of the UN's new International Atomic Energy Agency. (His appointment awaits formal approval of IAEA by governments concerned.)

Baird Associates-Atomic Instrument Company has appointed W. M. Draisin as promotion manager, and A. L. Krasnow as assistant sales manager.

Sincerely,

The Staff,
ATOMIC ENERGY NEWSLETTER

